DX-C730

Ref. No. 3548

ONKYO SERVICE MANUAL

COMPACT DISC PLAYER
MODEL DX-C730

Black model only

MD	120V AC, 60Hz
MP	230V AC, 50Hz
MW	120／220V AC, 50／60Hz

SATETY-RELATED COMPONENT WARNING!!

COMPONENTS INDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.
MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

Compact Disc Automatic Changer Model DX-C730

Signal readout system:	Optical non-contact
Reading rotation:	About 500 -200 r.p.m. (constant linear velocity)
Linear velocity:	1.2 - 1.4 m/s
Error correction system:	Cross Interleave Reed-Solomon code
D/A converter:	1 bit PWM ACCUPULSE
Sampling frequency:	400kHz (8 times oversampling)
Number of channels:	2 (stereo)
Frequency response:	2Hz - 20kHz
Total harmonic distortion:	0.004%
Dynamic range:	96dB
Signal to noise ratio:	98db
Channel separation:	92db (at 1kHz)
Wow and Flutter:	Below threshold of measurability
Output level:	2 volts r.m.s.
Power consumption:	15 watts
Power supply:	U.S.A. and Canadian models: AC 120V, 60Hz European models: AC 230V, 50Hz Worldwide models: AC 220 - 230V and 120V switchable, 50/60Hz
Dimensions (W×H×D):	435×131×429 mm (17-1/8"×5-3/16"×16-7/8")
Weight:	8.2kg (18.1 lbs.)

Specifications and external appearance are subject to change without notice because of product improvements.

CAUTION ON REPLACEMENT OF OPTICAL PICK UP

The laser diode in the optical pickup block is so sensitive to static electricity,surge current and etc, that the components are liable to be broken down or its reliability remarkably deteriorated.

During repair,carefulley take the following precautions. (The following precautions are included in the service parts.)

PRECAUTIONS

1.Ground for the work-desk.
Place a conductive sheet such as a sheet of copper (with inpedance lower than 10MΩ) on the work-desk and place the set on the conductive sheet so that the chassis.

2.Grounding for the test equipment and tools.
Test equipments and toolings should be grounded in order that their ground level is the same the ground of the power source.

3.Grounding for the human body.
Be sure to put on a wrist-strap for grounding whose other end is grounded.
Be particularly careful when the workers wear synthetic fiber clothes, or air is dry.

4.Select a soldering iron that permits no leakage and have the tip of the iron well-grounded.

5.Do not check the laser diode terminals with the probe of a circuit tester or oscilloscope.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMMISION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

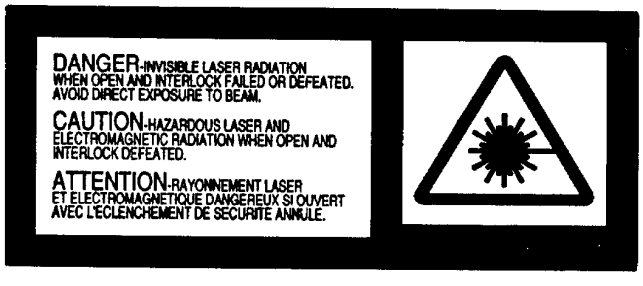
Laser Diode Properties

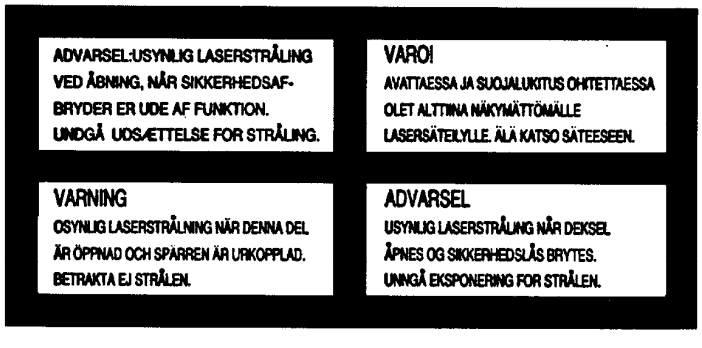
- Material: GaAlAs
- Wavelength: 760~800nm
- Emission Duration: continuous
- Laser output: max. 0.5mW*

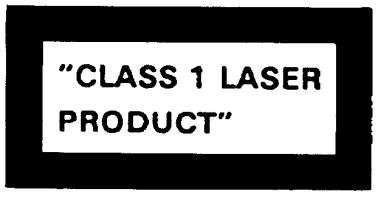
  *This output is the value measured at a distance about 1.8mm from the objective lens surface on the Optical Pick-up Block.

LASER WARNING LABEL

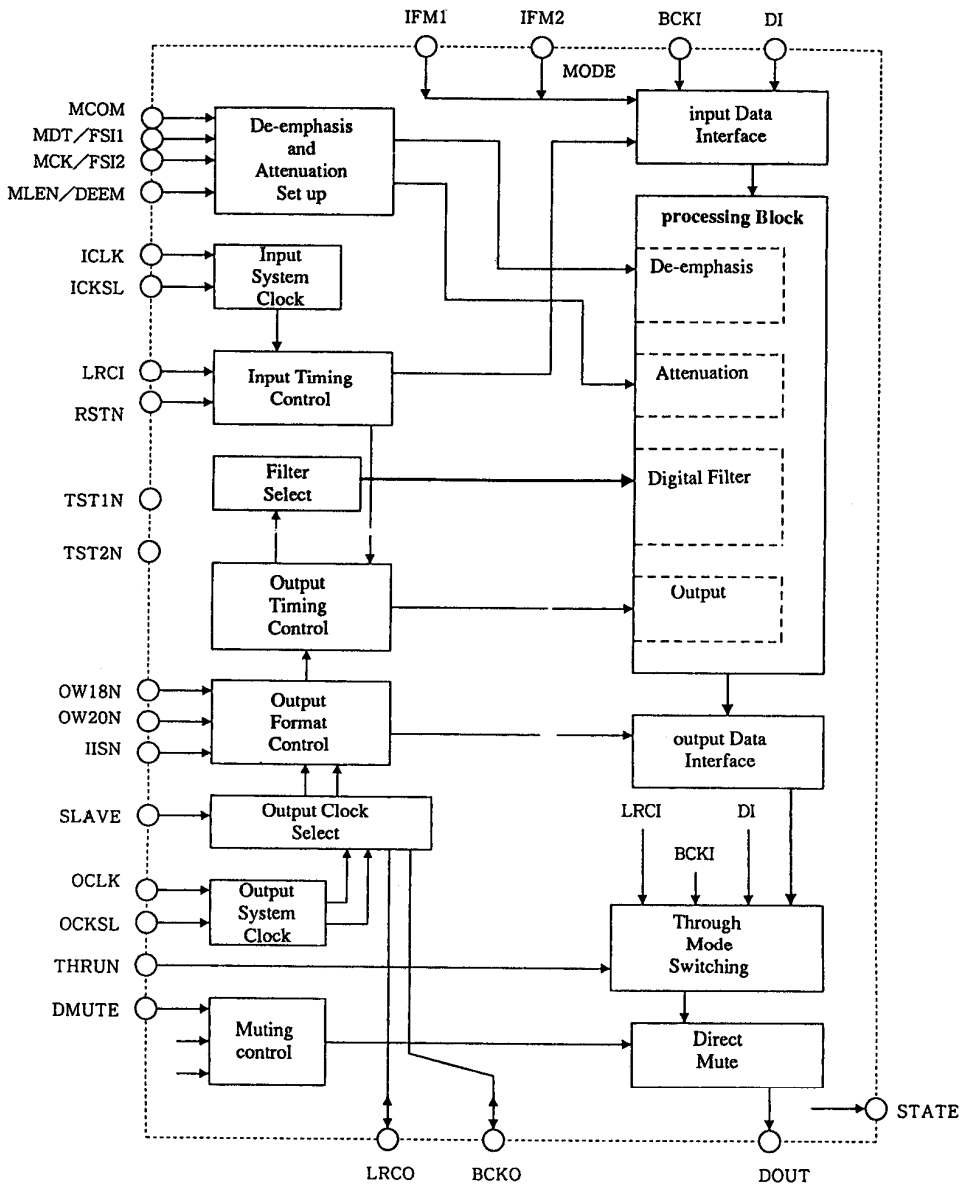
These labels are located on the mechanism.

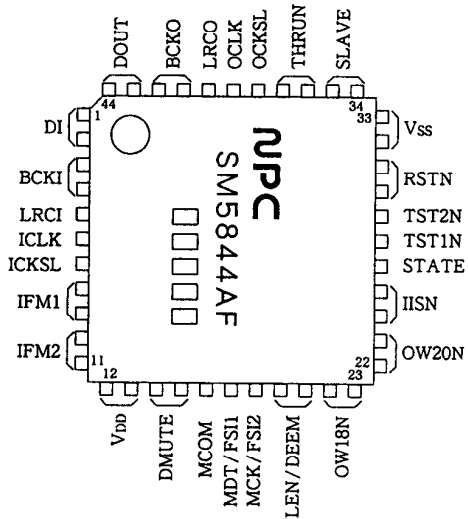

DANGER-INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK FAILED OR DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.
CAUTION-HAZARDOUS LASER AND ELECTROMAGNETIC RADIATION WHEN OPEN AND INTERLOCK DEFEATED.
ATTENTION-RAYONNEMENT LASER ET ELECTROMAGNETIQUE DANGEREUX SI OUVERT AVEC L'ECLENCHEMENT DE SECURITE ANNULE.


ADVARSEL:USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDER ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!
AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING
OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVARSEL
USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.



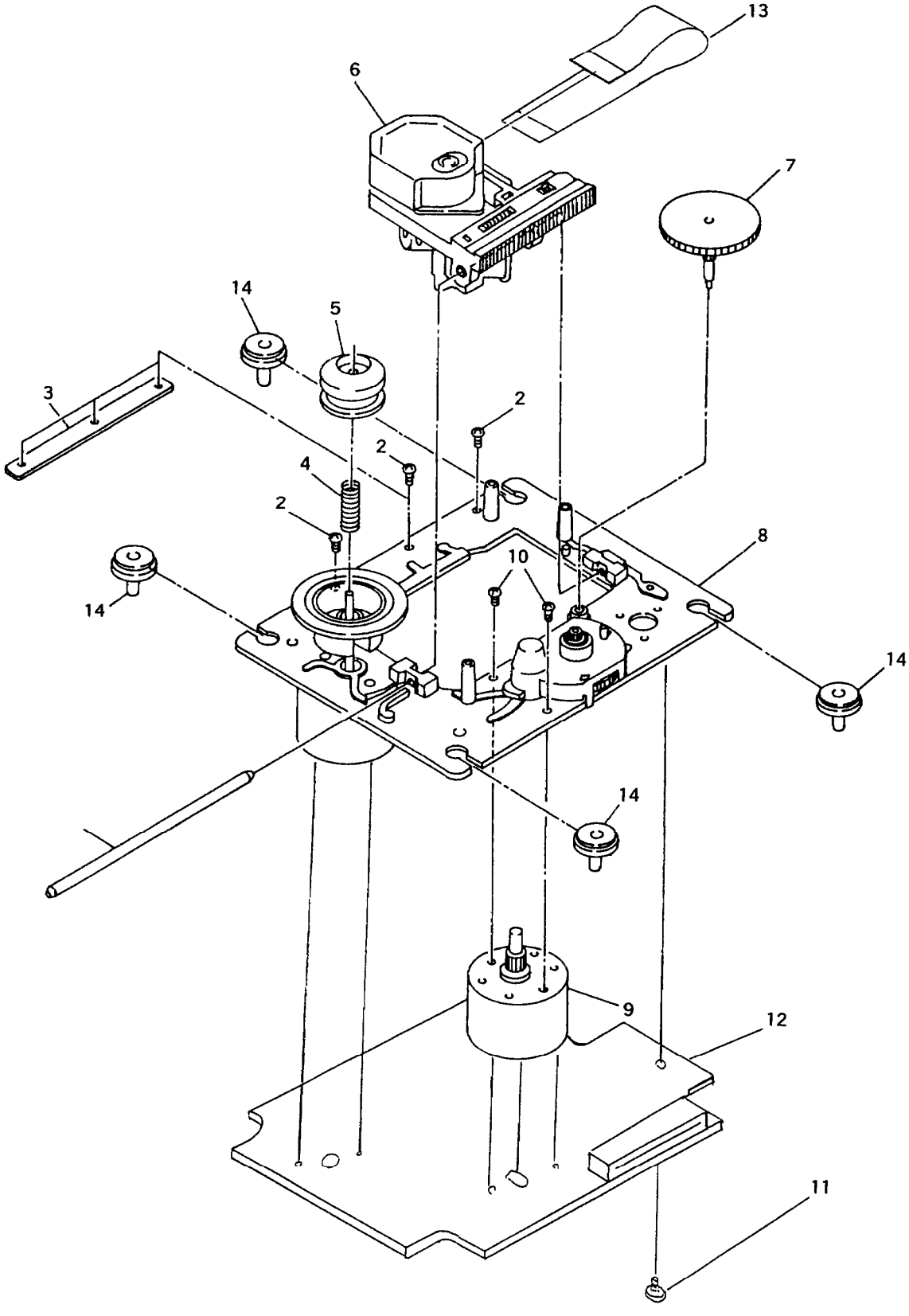
SM5844AF (SAMPLING RATE CONVERTOR)

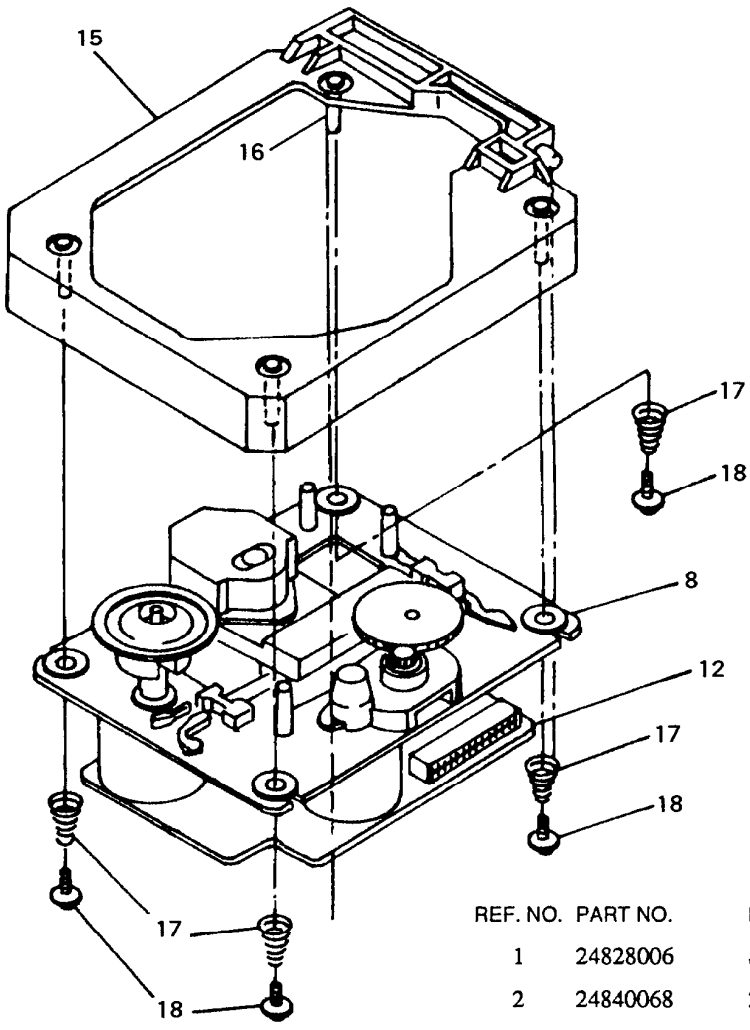




PIN NO.	SYMBOL	I/O	DESCRIPTON
1	7G	O	FL tube grid signal
2	6G		
3	5G		
4	4G		
5	3G		
6	2G		
7	1G		
8	Vdd	I	Power supply pin (+5V)
9	CLK	O	Command forward clock for signal process IC
10	DATA	O	Command data for signal process IC
11	XLT	O	Command latch for signal process IC
12	DMUT	O	DIgital mute signal for audio output
13	AMUT	O	Analog mute signal for audio output
14	SQCK	O	Sub code forward clock for signal process IC
15	EX.OE	O	Enable signal for port expander
16	SQSO	I	Sub code input pin from signal process IC
17	XRST	I	Reset signal input pin
18	RAM.CE	O	Chip enable signal for customer file RAM
19	RAM.WR	O	Write enable signal for customer file RAM
20	AVss	I	A/D converter grand pin
21	EXP.E1	O	Enable signal for port expander
22	EXP.E2	O	
23	EXP.E3	O	
24	EXP.E4	O	
25	AD3	I	Shuttle input pin
26	AD2	I	Key input pin
27	AD1	I	
28	AD0	I	
29	AVdd	I	A/D converter power supply pin (+5v)
30	AVref	I	A/D converter referense voltage input pin (+5V)
31	RI.IN	I	System signal
32	NC		Not used
33	Vss	I	Power supply grand pin
34	X1	I	Clock circuit input pin
35	X2	O	Clock circuit output pin
36	D7	I/O	Expander data for customer file RAM
37	D6		
38	D5		
39	D4		
40	D3		
41	D2	I/O	Expander data for customer file RAM
42	D1		
43	D0		
44	RE.PHS	I	Jog phase signal
45	RE.CLK	I	Jog clock signal
46	SCOR	I	Sub code block detection signal from signal process IC
47	RMCON	I	Remote control signal
48	IC	I	Micro processor internally connect pin (Grand)
49	RI.OUT	O	System signal
50	ROT.ST	I	Roullet stop position detection signal
51	ROT.POS	I	Roullet position detection signal
52	Vdd	I	Power supply pin (+5v)
53	NC		Not used
54	NC		Not used
55	P1	O	FL tube segment signal
56	P2		
57	P3		
58	P4		
59	P5		
60	P6		
61	P7		
62	P8		
63	P9		
64	P10		
65	P11		
66	P12		
67	P13		
68	P14		
69	P15		
70	P16		
71	-Vp	I	Negative power supply pin for FL tube
72	8G	O	FL tube grid signal
73	9G		
74	10G		
75	11G		
76	12G		
77	13G		
78	14G		
79	15G		
80	16G		

MECHANISM-EXPLODED VIEW
PICK-UP DRIVE UNIT KSK-1320A





REF. NO.	PART NO.	DESCRIPTION
1	24828006	Sled shaft
2	24840068	2 x 5, Self-tapping screw
3	24822015A	Reinforcement plate
4	24820024	Spring
5	24824003	Centering
6	24110011	Pick-up
7	24810023	Wheel
8	24802014	Chassis ass´y
9	24804012	Sled motor ass´y
10	82112003	2P+3FN, Pan head screw
11	24840099	2 x 6, Self-tapping screw
12	24840075A	AR-AS-1A, RF/Servo pc board ass´y
13	24840074	Flexible cable
14	24818012	Insulator (FLT)
15	24802016	Chassis (SUB)
16	24828012	Shaft (FLT)
17	24820026	Spring (FLT)
18	24609072Y	Screw (FLT)

PRINTED CIRCUIT BOARD - PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
MAIN CIRCUIT PC BOARD (NAAR-5763-1)		
	ICS	
Q101	22241007Y	MPD78043AGF-052
Q104-Q107	222745735HIT	HD74HC573P
Q108	22240991	LH5168-10L
Q109	22240239	TA7291S
Q110	22240771	BA6191
Q112	22240487A	CXD2500BQ
Q116	22240018	M51943A
Q301	22240913R3	SM5844AF
Q302	22240726	SM5872CN
Q401	222956	NJM2068D-D
Q403,Q404	22240191	NJM4565D-D
Q901	222780055MIT	M5F78M05L
Q902	222780075MIT	M5F78M07L
Q908,Q909	222780053	78L05
	TRANSISTORS	
Q102	2211164	2SC2120-Y
Q103	2212600	DTA124ES
Q111	2211255	2SC1815-GR
Q114,Q303	2213290	DTC114ES
Q115	2211455	2SA1015-GR
Q405-Q408	2211706	2SD655-F
Q903	2211504 or	2SA950-Y or
	2211503	2SA950-O
Q904,Q905	2212524	2SK363-GR
Q906	2201285	2SD882-Q
Q907	2201275	2SB772-Q
	OPTICAL MODULE	
Q113	24120038	GP1F32T
	DIODES	
D101,D104,D106,D107,	223205 or	1SS270A or
D108,D110	223163	1SS133
D102,D105	224470562	MTZJ5.6B, Zener
D103	223191	SD101
D909-D912	22380035 or	GP104003E or
	22380032	1SR139-100
D913	224473004	MTZJ30D, Zener
D914	224470563	MTZJ5.6C, Zener
D915,D916	224470913	MTZJ9.1C, Zener
	CRRA LOCK,CRYSTAL	
X101	3010229	EFOEC4004A4, CERA LOCK
X102	3010112	KD6586FFB, CRYSTAL
X301	3010272	AT-38-192, CRYSTAL
	CAPACITORS	
C103,C109,C113,C115,	354721019	CE04W6.3V, 100M, ELECT C
C130,C135,C307		
C104	374724734	ECQ-V50V, 473J, TF C
C105	374721524	ECQ-B50V, 152J, TF C
C106,C107	374721034	ECQ-B50V, 103J, TF C
C116,C301,C913,C914	374721044	ECQ-V50V, 104J, TF C
C117	354741019	CE04W16V, 100M, ELECT C
C118-C121,C923	354744709	CE04W16V, 47M, ELECT C
C122	3000064	EECF5R5U474, FYD C
C126,C140	374722224	ECQ-B50V, 222J, TF C
C127	354780479	CE04W50V, 4.7M, ELECT C
C128	354721029	CE04W6.3V, 1000M, ELECT C
C129	354782299	CE04W50V, 0.22M, ELECT C
C133,C413,C414,C908	354784709	CE04W50V, 47M, ELECT C
C141,142	374722234	ECQ-B50V, 223J, TF C
C302,C309,C310,C921	354722219	CE04W6.3V, 220M, ELECT C
C312,C927	354724719	CE04W6.3V, 470M, ELECT C
C407,C408	374721824	ECQ-B50V, 182J, TF C
C409,C410	374724724	ECQ-B50V, 472J, TF C
C423-C426,C917-C920	354742219	CE04W16V, 220M, ELECT C
C429	354782209	CE04W50V, 22M, ELECT C
C915,C916	393343327	CE04W16V, 3300M, VX C
C909,C911	354764709	CE04W35V, 47M, ELECT C
C931,C932	374722244	ECQ-V50V, 224J, TF C

CIRCUIT NO.	PART NO.	DESCRIPTION
	RESISTOR	
R147	453530184	RNU1/2WCJ, 1.8, METAL R
	OTHERS	
P101A	25050895 or	NSCT-31P690, FFC SOCKET or
	25050937	NSCT-31P724, FFC SOCKET
P102	25045330	NPJ-2PDBL184, JACK
P103	25065425	SCREW M3 TERMINAL
P401	25045422	NPJ-2PDBL247, JACK
P701A	25050980	NSCT-40P767, FFC SOCKET
P751A	25051088	NSCT-4P875, WIRE HOLDER
P751B	25055625	NPLG-4P587, WIRE TRAP
P901B	25050273	NSCT-9P101, WIRE TRAP
P902B	25050272	NSCT-8P100, WIRE TRAP
E102	27160145-1 or	RAD51, HEAT SINK or
	27160145	RAD51, HEAT SINK
E105	27190751	HOLDER (X301)
E110	27190540-1	UAMS-03-0, HOLDER
DISPLAY CIRCUIT PC BOARD (NADIS-5764-1)		
	FL TUBE	
Q701	212150Y	16-BT-42GK
	OTHERS	
P701B	25050946	NSCT-40P733, FFC SOCKET
S701-S716	25035652	NPS-111-S604, PUSH SW
S717	25065514	SRGPHJ-1-2-1, JOG SHUTTLE
E104	27190979AY	HOLDER(FL)
POWER SUPPLY CIRCUIT PC BOARD (NAPS-5765-1)		
	DIODE	
D901-D908	⚠ 22380035 or	GP104003E or
	⚠ 22380032	1SR139-100
	CHOKE COIL	
L901	⚠ 231222	NCH-3454
	CAPACITORS	
C962-C965	374721044	ECQ-V50V, 104J, TF C
C901,C902	393343327	CE04W16V, 3300M, VX C
C905-C907	354761019	CE04W35V, 100M, ELECT C
C960,C961	374722244	ECQ-V50V, 224J, TF C
	OTHERS	
P901A	25051113	NSCT-9P900, WIRE HOLDER
P902A	25051112	NSCT-8P899, WIRE HOLDER
P903A	⚠ 25055676	NPLG-2P632, POWER PLUG
P906	25065425	SCREW M3 TERMINAL
S901	25065437	NSS-22157P, SLIDE SW <W>
REMOTE SENSOR CIRCUIT PC BOARD (NAETC-5766-1)		
	REMOTE SENSOR	
Q751	241302	PIC-12043TH2
	LED	
D751	225324D or	SEL6910A-D, LED or
	225324C	SEL6910A-C, LED
	CAPACITOR	
C751	355721019	CE04W6.3V, 100M, ELECT C
	OTHERS	
P751A	25051088	NSCT-4P875, WIRE HOLDER
S751-S756	25035652	NPS-111-S604, PUSH SW
POWER SWITCH CIRCUIT PC BOARD (NAPS-5767-1)		
	CAPACITOR	
C951	⚠ 3500191	DE7150F 103M, AC400V/125V, IS
	POWER SWITCH	
S951	⚠ 25035636	NPS-111 -L590P

<W>: Worldwise model only

CHASSIS PARTS LIST

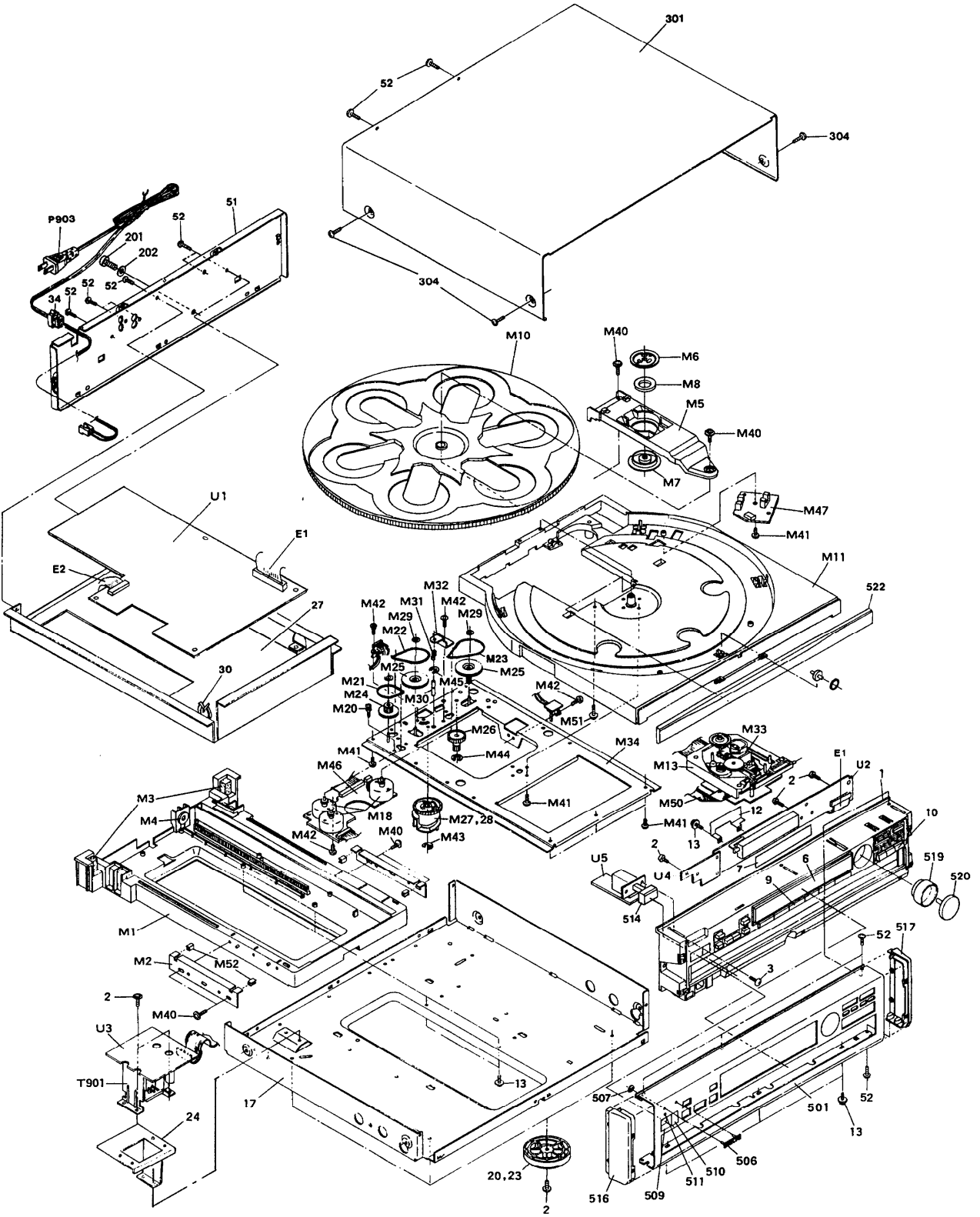
REF. NO.	PART NO.	DESCRIPTION
1	27110932AY	FRONT BRACKET
2	838130088	3TTB+8B, SCREW
3	838430107	3TTB+10S(BC), SCREW
6	28191737Y	CLEAR PLATE
7	28133354Y	BACK PLATE
9	28325348Y	KNOB(DISC)
10	28325349	KNOB(PLAY) AS
12	27141662Y	RETAINER(F)
13	831430100	3TTW+10P(BC), SCREW
17	27100312Y	CHASSIS
23	27175316Y	LEG
24	27130772Y	BRACKET(PT)
27	27130773Y	BRACKET(PC)
29	29361957Y	LABEL(ALL2)
30	27301778Y	HL-18-0, CLAMP
31	27190428-1Y	LSR-10R, HOLDER
34	⚠ 27300750	NIFCO #2271, CORD BUSHING
51	27122215Y	REAR PANEL <D>
	27122216Y	REAR PANEL <P>
	27122217Y	REAR PANEL <W>
52	838430088	3TTB+8B(BC), SCREW
301	28184654Y	TOP COVER
304	838440089	4TTB+8C(BC), SCREW
501	27211824AY	FRONT PANEL
506	28135243	BADGE
507	8910301	CS RING
509	27267942Y	GUIDE(POW)
510	28191738Y	CLEAR PLATE (RE)
511	28198846Y	FACET(3)
514	28325264	KNOB(POW)
516	28125333Y	END CAP(L)
517	28125334Y	END CAP(R)
519	28325352AY	KNOB(S)
520	28325353AY	KNOB(J)
522	28148346Y	DOOR
E1	2047402012Y	NCFC7-402012, FFC
E2	2046312022Y	NCFC6-312022, FFC
P903	⚠ 253192HIT	AS-UC-6#18, AC CORD <D>
	⚠ 253193HIT	AS-CEE, AC CORD <P,W>
T901	⚠ 2301185Y	NPT-1268D, POWER TRANSFORMER <D>
	⚠ 2301186Y	NPT-1268P, POWER TRANSFORMER <P>
	⚠ 2301187Y	NPT-1268DG, POWER TRANSFORMER <W>
U1	1H336563-1AY	NAAR-5763-1A,MAIN PC BOARD AS <D>
	1H336563-1BY	NAAR-5763-1B,MAIN PC BOARD AS <P>
	1H336563-1CY	NAAR-5763-1C,MAIN PC BOARD AS <W>
U2	1H336564-1AY	NADIS-5764-1A,DISPLAY PC BOARD AS <D>
	1H336564-1BY	NADIS-5764-1B,DISPLAY PC BOARD AS <P>
	1H336564-1CY	NADIS-5764-1C,DISPLAY PC BOARD AS <W>
U3	1H336565-1AY	NAPS-5765-1A,POWER SUPPLY PC BOARD AS <D>
	1H336565-1BY	NAPS-5765-1B,POWER SUPPLY PC BOARD AS <P>
	1H336565-1CY	NAPS-5765-1C,POWER SUPPLY PC BOARD AS <W>
U4	1H336566-1AY	NAETC-5766-1A,REMOTE SENSOR PC BOARD AS <D>
	1H336566-1BY	NAETC-5766-1B,REMOTE SENSOR PC BOARD AS <P>
	1H336566-1CY	NAETC-5766-1C,REMOTE SENSOR PC BOARD AS <W>
U5	1H336567-1AY	NAPS-5767-1A,POWER SWITCH PC BOARD AS <D>
	1H336567-1BY	NAPS-5767-1B,POWER SWITCH PC BOARD AS <P>
	1H336567-1CY	NAPS-5767-1C,POWER SWITCH PC BOARD AS <W>

<D> : 120V model only
<P> : 230V model only
<W> : Worldwide model only

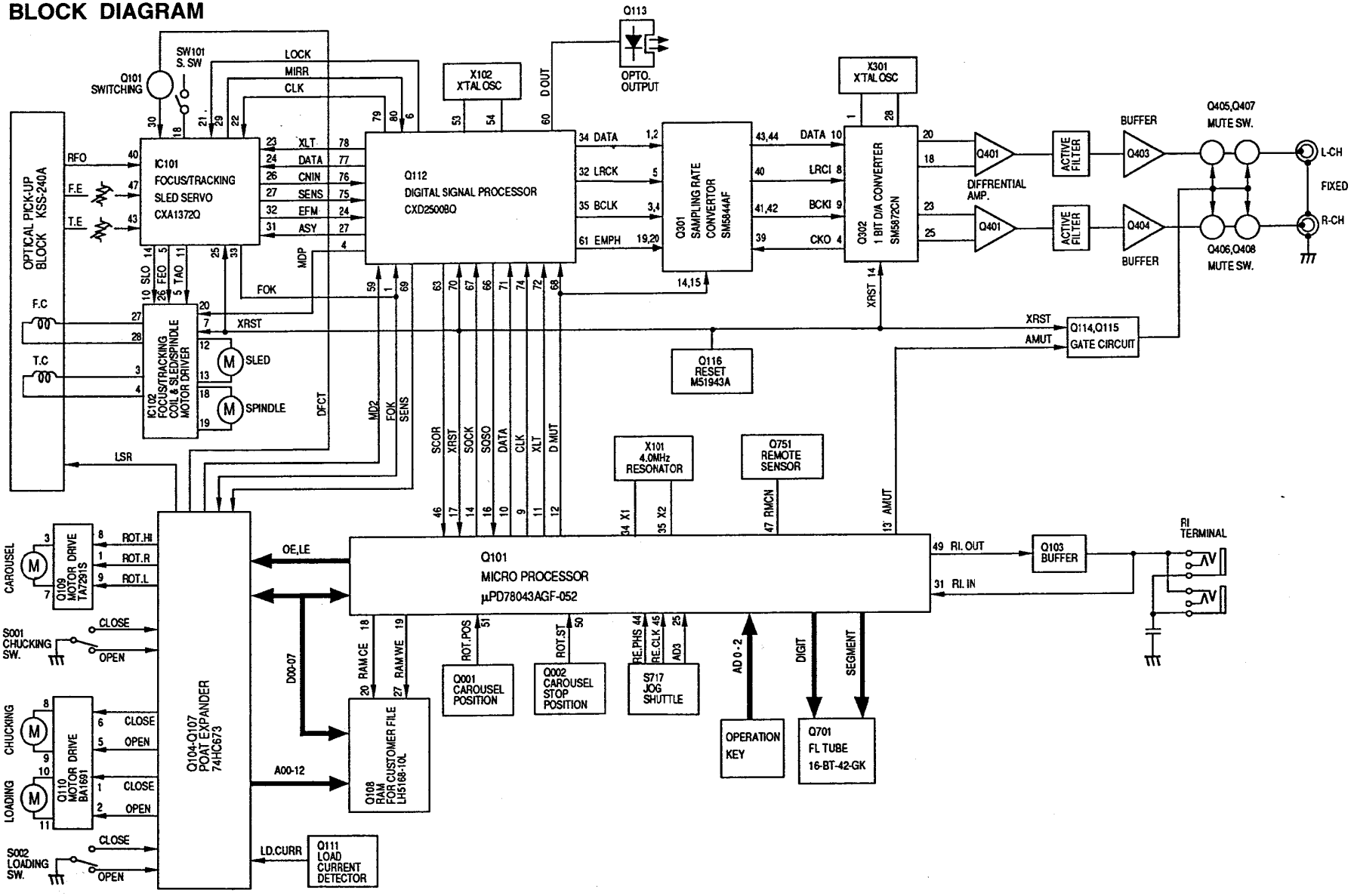
CHANGER MECHANISM PARTS LIST (NCD-57S-C)

CIRCUIT NO.	PART NO.	DESCRIPTION
M1	24840095AY	RAIL
M2	24826006Y	HOLDER (GUIDE)
M3	24836006AY	CUSHION (TRAY)
M4	24836016Y	CUSHION (LOCK)
M5	24814003Y	ARM (B)
M6	24830004Y	YOKE (CHB)
M7	24824004	CAP (CHB)
M8	24832006Y	MAGNET (CHB)
M9	24836007Y	CUSHION (A2)
M10	24840096Y	ROULETTE
M11	24840097AY	RG-208086, TRAY
M12	24840098Y	ROLLER
M13	24802016Y	CHASSIS (SUB)
M18	24804015Y	RF-500TB-14415, MOTOR
M19	24810028Y	PULLEY
M33	24609071AY	SCREW
M21	24816009Y	RBR BELT (A)
M22	24816010AY	RBR BELT (B)
M23	24816011Y	RBR BELT (D)
M24	24810029Y	GEAR (A)
M25	24810030Y	GEAR (B)
M26	24810031Y	GEAR (D)
M27	24810026Y	CAM GEAR (A)
M28	24810027Y	CAM GEAR (B)
M29	24834014Y	WASHER
M30	24828007Y	SHAFT
M31	24820025Y	SPRING
M32	24822017Y	BRACKET (PH)
M33	24800011BY	KSK-1320A, CDP MECHA
M34	24802017AY	CHASSIS AS
M40	831430100Y	3TTW+10P(BC), SCREW
M41	833430080Y	3TTP+8P(BC), SCREW
M42	82112606Y	2.6P+6FN, SCREW
M43	8930401Y or	ES-4S, RING(E) or
	8930401SY	ES-4S, RING(E)
M44	8930201Y or	ES-2S, RING(E) or
	8930201SY	ES-2S, RING(E)
M45	8930301Y or	ES-3S, RING(E) or
	8930301SY	ES-3S, RING(E)
M46	1H242542-1Y	ETC-AS
M47	1H242543-1Y	ETC-AS
M48	1H242544-1Y	SW-AS
M49	1H242545-1Y	SW-AS
M50	2046220822Y	NCFC6-220822, FFC
M51	24609073Y	SCREW
M53	260208Y	WIRE TIE

CHASSIS EXPLODED VIEW



BLOCK DIAGRAM

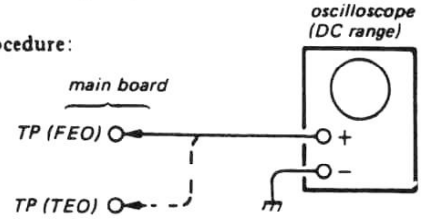


The following is a simple adjustment method.

– Simple Adjustment –

Note: Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

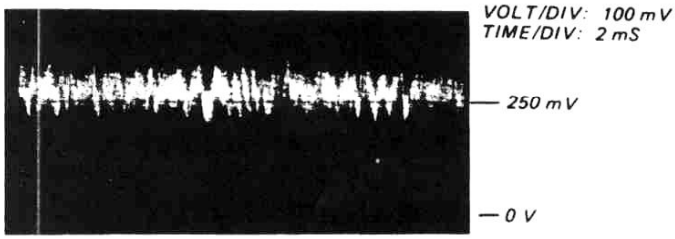
Procedure:



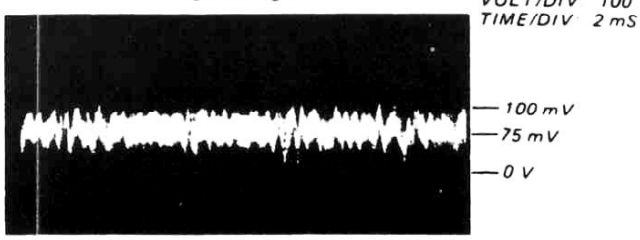
1. Keep the set horizontal.
   (If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2 axis device.)
2. Insert disc (YEDS-18) and press ▷PLAY button.
3. Connect oscilloscope to RF/ Servo board TP (FE).
4. Adjust RV102 so that the waveform is as shown in the figure below. (focus gain adjustment)

- Incorrent Examples (DC level changes more than on adjusted waveform)

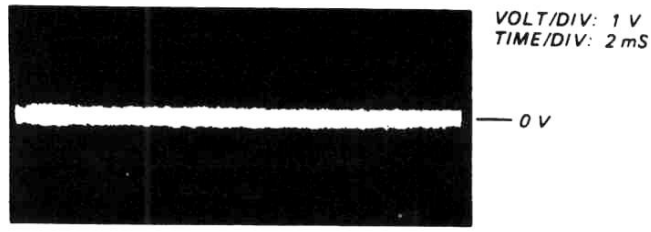
low focus gain



high focus gain

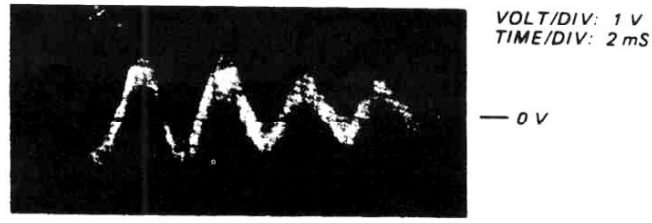


5. Connect oscilloscope to RF/ Servo board TP (TE).
6. Adjust RV101 so that the waveform is as shown in the figure below. (tracking gain adjustment)

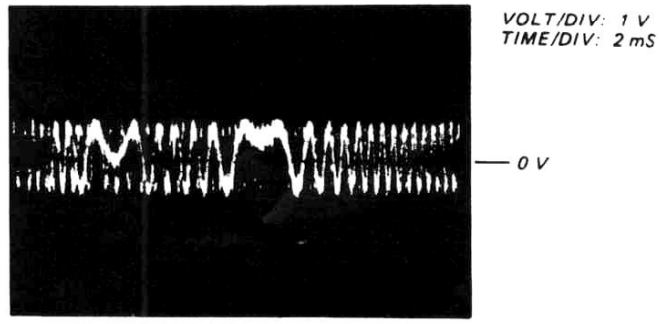


- Incorrect Examples (fundamental wave appears)

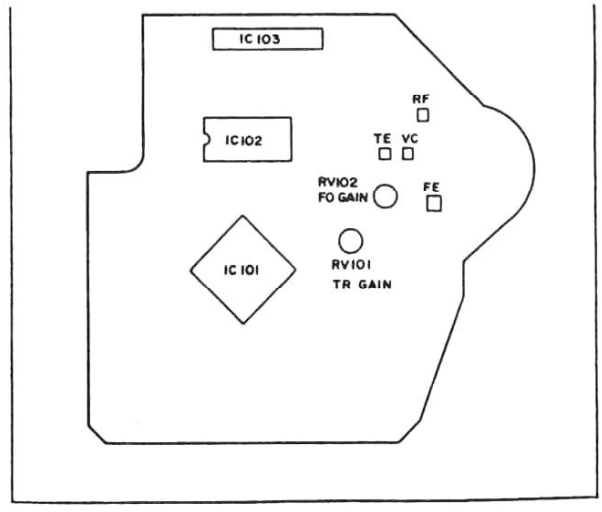
low tracking gain



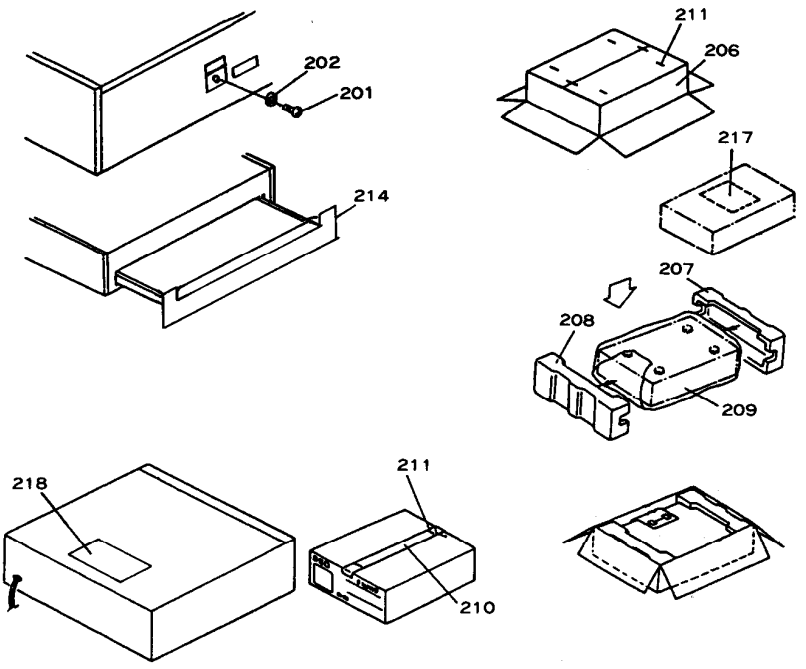
high tracking gain
(higher fundamental wave than for low gain)



Adjustment Location: RF/ Servo board



PACKING VIEW

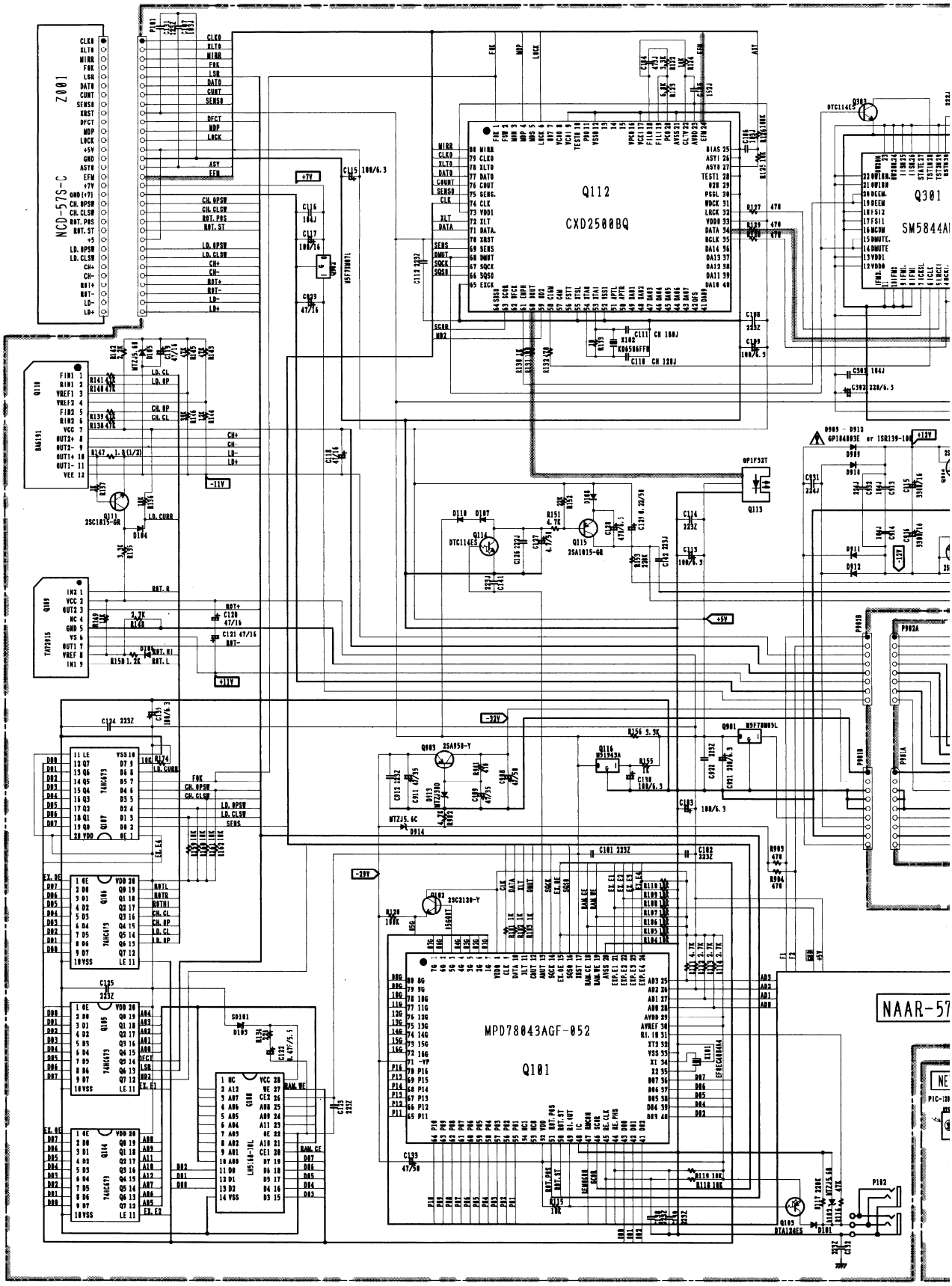


REF. NO	PART NO.	DESCRIPTION
201	82115018	5P+18FN, SCREW
202	27270382Y	t0.5x15x5.2, SPACER
206	29053007AY	CARTON
207	29091726Y	PAD (L)
208	29091727Y	PAD (R)
209	29100141AY	700x600, POLY BAG
210	29110071	W50, PP TAPE
211	282301	STAPLE
214	29095721Y	SHEET (DOOR)
217	29355207Y	INSTRUCTION SHEET
218	29360687	LABEL (CLASS 1) <P,W>
	29361958Y	UPC LABEL <D>
	29360840	LABEL (SHEET) <D>
	29361786Y	LABEL <W>
	29360404	SN SHEET

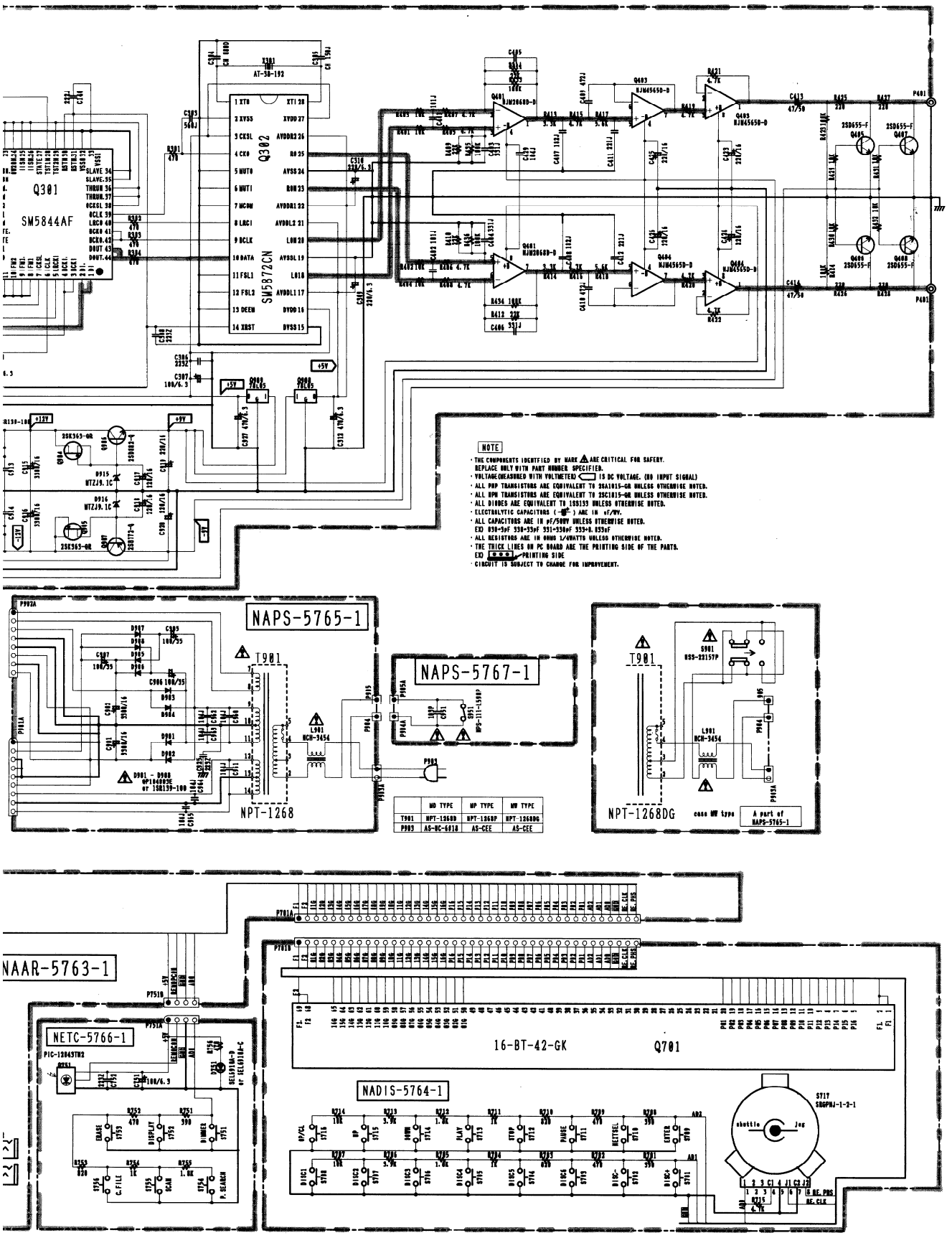
	Accessary bag ass'y	
	29100097-1AY	350x250, POLY BAG
	2010244Y or	PIN CORD AS
	2010326Y	
	2010200	3.5MINI PLUG, CORD AS
⬅	24140322Y	RC-322C, REMOTE CONTROLLER
	3010165Y or	UM-3, BATTERY
	3010194Y	
↖	29342309Y	INSTRUCTION MANUAL (E)
	29342310Y	INSTRUCTION MANUAL (U6) <P>
	29342311Y	INSTRUCTION MANUAL (U3) <W>
	25055040	CV-K-2, CV PLUG <W>
	29365019B	WARRANTY CARD <D>
	29358002K	SERVICE STATION LIST <D>

<D> : 120V model only
<P> : 230V model only
<W> : Worldwise model only

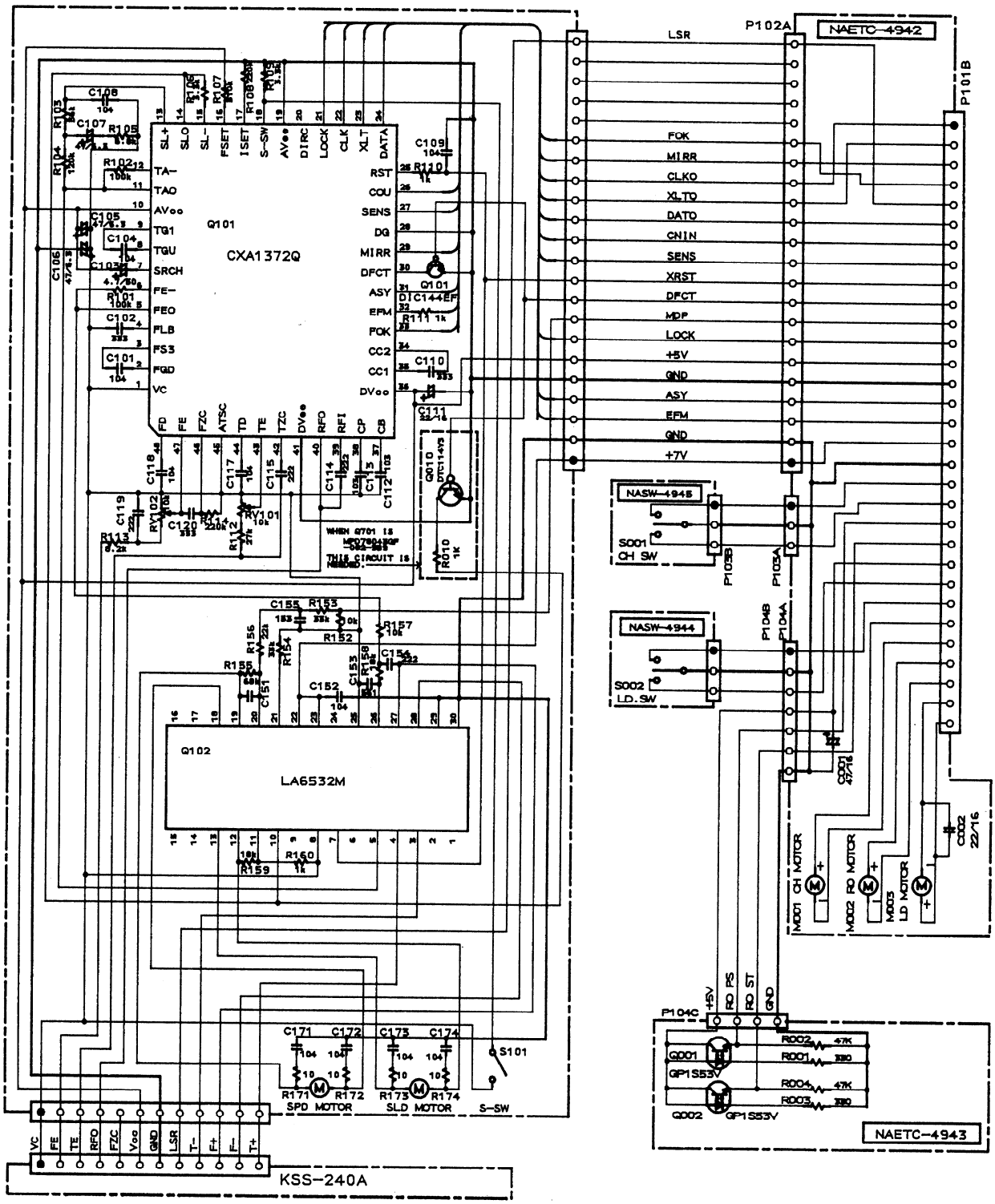
SCHEMATIC DIAGRAM (1/2)



D E F G


Q301
SM5844AF
Q302
SW5872CN
AT-38-192
NOTE
· THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY.
REPLACE ONLY WITH PART NUMBER SPECIFIED.
· VOLTAGE(MEASURED WITH VOLTMETER) ⟨⟩ IS DC VOLTAGE. (NO INPUT SIGNAL)
· ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
· ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
· ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
· ELECTROLYTIC CAPACITORS ( ) ARE IN uF/WV.
· ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
EX) 050=5pF 330=33pF 331=330pF 333=0.033uF
· ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
· THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
EX) PRINTING SIDE
· CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.
NAPS-5765-1
T901
NPT-1268
NAPS-5767-1
T901
S901
HSS-22157P
NPT-1268DG
case MW type
A part of NAPS-5765-1
MD TYPE
MP TYPE
MW TYPE
T901
NPT-1268D
NPT-1268P
NPT-1268DG
P903
AS-DC-6818
AS-CEE
AS-CEE
NAAR-5763-1
NETC-5766-1
PIC-12045TM2
16-BT-42-GK
Q701
NADIS-5764-1
S717
SBGPHJ-1-S-1
shuttle
jog

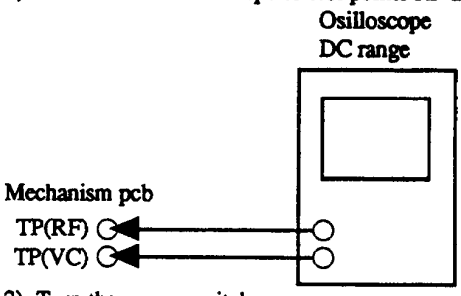
SCHEMATIC DIAGRAM (2/2)



ADJUSTMENT PROCEDURES

It is not necessary to perform the adjustment of optical pickup.
This confirmation should be made when replacing the optical pickup.

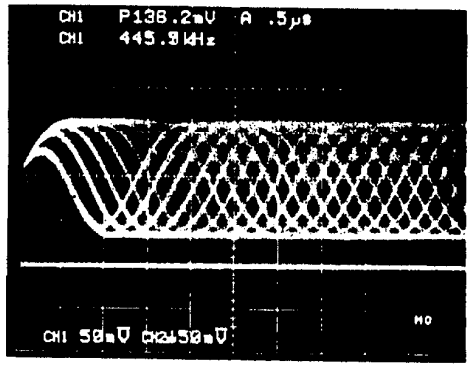
1). Connect the oscilloscope to test points RF and VC.



2). Turn the power switch on.

3). Load the test disc YEDS-18 on the tray and press the play button.

4). Confirm that the waveform on the oscilloscope is optimum eye pattern and optimum level as shown photo 1.
Optimum eye pattern means that shape "◇" can be clearly distinguished at the center of the waveform.



GND

REFERENCE

Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

Symptoms \ Gain	Focus	Tracking
• The time until music starts becomes longer for STOP →▷PLAY or automatic selection (⏮ ⏭ buttons pressed. (Normally takes about 2 seconds.)	low	low or high
• Music does not start and disc continues to rotate for STOP→▷PLAY or automatic selection (⏮ ⏭ buttons pressed.)	–	low
• Disc table opens shortly after STOP→▷PLAY.	low or high	–
• Sound is interrupted during PLAY. Or time counter display stops progressing.	–	low
• More poise during 2-axis device operation.	high	high

TEST MODE

1. Mechanical Servo System Measurement Mode

When turning on the power, continue to push the [UP] key at the same time.
This mode continues to operate while the set is turned on the power.

1) Focus S-Curve Measuring Function

When the set reads the disc for the first time (Lead-In), pushing the [PAUSE] key, the focus servo is turned off. The pick-up lens only moves up and down.

2) Tracking Balance Tuning Function

When the set plays, pushing the [PAUSE] key, the Tracking servo is turned off.

3) CLV-S Motion Measurement Function

While the Tracking servo is turned off, pushing the [FF] key, the time display in FL-tube displays the frame number.

2. File (CUSTOM FILE & CUSTOM PROGRAM) All Erase Mode

When turning on the power, continue to push the [ERASE] key at the same time.
The [ERASE] character is displayed. And then all of CUSTOM FILE and CUSTOM PROGRAM are erased.

3. Disc Chacking Position For Shipment

When turning on the power, continue to push the [ERASE] key at the same time, the roulette stops at the DISC1 position.
The chacking motion finishes when the [POWER OFF] character is displayed.

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